













































TABLE 9 (continued)

Panel B: Replicating Table 4 with Various Narcissism Measures

DV: Non-GAAP Exclusions

	Narcissism Measure									
	Narcissism Index		Photo Size		Relative Cash Pay		Relative Non-Cash Pay		Signature Size	
	I/B/E/S (1) Coef.	Bentley et al. (2018) (2) Coef.	I/B/E/S (3) Coef.	Bentley et al. (2018) (4) Coef.	I/B/E/S (5) Coef.	Bentley et al. (2018) (6) Coef.	I/B/E/S (7) Coef.	Bentley et al. (2018) (8) Coef.	I/B/E/S (9) Coef.	Bentley et al. (2018) (10) Coef.
<i>Narcissism (H2:++)</i>	0.01**	0.01**	0.02	0.01*	0.01**	0.00	0.00	0.01	-0.00	0.00
<i>BTM</i>	0.09***	0.10***	0.09***	0.10**	0.09***	0.10***	0.09***	0.10**	0.10**	0.14
<i>SalesGrowth</i>	-0.14***	-0.15**	-0.14***	-0.15**	-0.14***	-0.15**	-0.14***	-0.15**	-0.17***	-0.26*
<i>SizeEquity</i>	0.00	0.03***	0.00	0.03***	0.00	0.03***	0.00	0.03***	-0.02*	0.02
<i>Profitable</i>	-0.01	-0.12***	-0.01	-0.12***	-0.01	-0.12***	-0.01	-0.12***	-0.02	-0.32***
<i>ROA</i>	2.28***	-0.94*	2.23***	-1.04*	2.24***	-1.08*	2.24***	-1.03*	3.62***	0.96
Firm Fixed Effects	No	No	No	No	No	No	No	No	No	No
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-Quarter Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,092	6,353	19,092	6,353	19,092	6,353	19,092	6,353	4,970	1,416
Adjusted R <sup>2</sup>	0.05	0.10	0.04	0.08	0.05	0.08	0.04	0.08	0.07	0.14

\*\*\*, \*\*, \* Indicate coefficients statistically different from zero at the 1 percent, 5 percent, and 10 percent levels (two-tailed), respectively. All continuous variables are winsorized at the 1 percent and 99 percent levels. Standard errors are clustered by firm and year-quarter. All variables are as defined in Appendix A.

## REFERENCES

- Adams, R. B., H. Almeida, and D. Ferreira. 2005. Powerful CEOs and their impact on corporate performance. *Review of Financial Studies* 18 (4): 1403–1432. <https://doi.org/10.1093/rfs/hhi030>
- Americ, J. H., and R. J. Craig. 2010. Accounting as a facilitator of extreme narcissism. *Journal of Business Ethics* 96 (1): 79–93. <https://doi.org/10.1007/s10551-010-0450-0>
- Anderson, J. R., and M. E. Tirrell. 2004. Too good to be true: CEOs and financial reporting fraud. *Consulting Psychology Journal* 56 (1): 35–43. <https://doi.org/10.1037/1061-4087.56.1.35>
- Barton, J., and P. Simko. 2002. The balance sheet as an earnings management constraint. *The Accounting Review* 77 (s-1): 1–27. <https://doi.org/10.2308/accr.2002.77.s-1.1>
- Baumker, M., P. Biggs, S. E. McVay, and J. Pierce. 2014. The disclosure of non-GAAP earnings following Regulation G: An analysis of transitory gains. *Accounting Horizons* 28 (1): 77–92. <https://doi.org/10.2308/acch-50645>
- Bentley, J. W., T. Christensen, K. Gee, and B. Whipple. 2018. Disentangling managers' and analysts' non-GAAP reporting. *Journal of Accounting Research* 56 (4): 1039–1081. <https://doi.org/10.1111/1475-679X.12206>
- Bertrand, M., and A. Schoar. 2003. Managing with style: The effect of managers on firm policies. *Quarterly Journal of Economics* 118 (4): 1169–1208. <https://doi.org/10.1162/003355303322552775>
- Bhattacharya, N., E. L. Black, T. E. Christensen, and C. R. Larson. 2003. Assessing the relative informativeness and permanence of pro forma earnings and GAAP operating earnings. *Journal of Accounting and Economics* 36 (1/3): 285–319. <https://doi.org/10.1016/j.jacceco.2003.06.001>
- Black, D. E., and T. E. Christensen. 2009. U.S. managers' use of "pro forma" adjustments to meet strategic earnings targets. *Journal of Business Finance and Accounting* 36 (3/4): 297–326. <https://doi.org/10.1111/j.1468-5957.2009.02128.x>
- Black, D. E., T. E. Christensen, J. T. Ciesielski, and B. C. Whipple. 2018. Non-GAAP reporting: Evidence from academia and current practice. *Journal of Business Finance and Accounting* 45 (3/4): 259–294. <https://doi.org/10.1111/jbfa.12298>
- Bowen, R. M., A. K. Davis, and D. A. Matsumoto. 2005. Emphasis on pro forma versus GAAP earnings in quarterly press releases: Determinants, SEC intervention, and market reactions. *The Accounting Review* 80 (4): 1011–1038. <https://doi.org/10.2308/accr.2005.80.4.1011>
- Bradshaw, M. T., and R. G. Sloan. 2002. GAAP versus the street: An empirical assessment of two alternative definitions of earnings. *Journal of Accounting Research* 40 (1): 41–66. <https://doi.org/10.1111/1475-679X.00038>
- Bradshaw, M. T., T. E. Christensen, K. Gee, and B. C. Whipple. 2018. *Investor preference and manager motivation for non-GAAP earnings: Correcting for measurement error in empirical research*. Working paper, Boston College.
- Brown, L. D., and K. Sivakumar. 2003. Comparing the quality of two operating income measures. *Review of Accounting Studies* 4 (8): 561–572. <https://doi.org/10.1023/A:1027328418571>
- Brunell, A. B., W. A. Gentry, W. K. Campbell, B. J. Hoffman, K. W. Kuhnert, and K. G. DeMarree. 2008. Leader emergence: The case of the narcissistic leader. *Personality and Social Psychology Bulletin* 34 (12): 1663–1676. <https://doi.org/10.1177/0146167208324101>
- Campbell, W. K., B. J. Hoffman, S. M. Campbell, and G. Marchisio. 2011. Narcissism in organizational contexts. *Human Resource Management Review* 21 (4): 268–294. <https://doi.org/10.1016/j.hrmr.2010.10.007>
- Campbell, W. K., G. D. Reeder, C. Sedikides, and A. J. Elliot. 2000. Narcissism and comparative self-enhancement strategies. *Journal of Research in Personality* 34 (3): 329–347. <https://doi.org/10.1006/jrpe.2000.2282>
- Chatterjee, A., and D. C. Hambrick. 2007. It's all about me: Narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly* 52 (3): 351–386. <https://doi.org/10.2189/asqu.52.3.351>
- Chatterjee, A., and D. C. Hambrick. 2011. Executive personality, capability cues, and risk taking: How narcissistic CEOs react to their successes and stumbles. *Administrative Science Quarterly* 56 (2): 202–237. <https://doi.org/10.1177/0001839211427534>
- Cragun, O., K. J. Olsen, and P. M. Wright. 2020. Making CEO narcissism research great: A review and meta-analysis of CEO narcissism. *Journal of Management* 46 (6): 908–936. <https://doi.org/10.1177/0149206319892678>
- Doyle, J. T., J. N. Jennings, and M. T. Soliman. 2013. Do managers define non-GAAP earnings to meet or beat analyst forecasts? *Journal of Accounting and Economics* 56 (1): 40–56. <https://doi.org/10.1016/j.jacceco.2013.03.002>
- Doyle, J. T., R. J. Lundholm, and M. T. Soliman. 2003. The predictive value of expenses excluded from "pro forma" earnings. *Review of Accounting Studies* 8 (2/3): 145–174. <https://doi.org/10.1023/A:1024472210359>
- Dyregren, S. D., M. Hanlon, and E. L. Maydew. 2010. The effects of executives on corporate tax avoidance. *The Accounting Review* 85 (4): 1163–1189. <https://doi.org/10.2308/accr.2010.85.4.1163>
- Easton, P. 2003. Discussion of "The predictive value of expenses excluded from 'pro forma' earnings." *Review of Accounting Studies* 8 (2/3): 175–183. <https://doi.org/10.1023/A:1024457227197>
- Foster, J. D., J. W. Shenesey, and J. S. Goff. 2009. Why do narcissists take more risks? Testing the roles of perceived risks and benefits of risky behaviors. *Personality and Individual Differences* 47 (8): 885–889. <https://doi.org/10.1016/j.paid.2009.07.008>
- Frank, K. 2000. Impact of a confounding variable on a regression coefficient. *Sociological Methods and Research* 29 (2): 147–194. <https://doi.org/10.1177/0049124100029002001>
- Frank, K., S. Maroulis, M. Duong, and B. Kelcey. 2013. What would it take to change an inference? Using Rubin's causal model to interpret the robustness of causal inferences. *Educational Evaluation and Policy Analysis* 35 (4): 437–460. <https://doi.org/10.3102/0162373713493129>

- Frankel, R., S. McVay, and M. Soliman. 2011. Non-GAAP earnings and board independence. *Review of Accounting Studies* 16 (4): 719–744. <https://doi.org/10.1007/s11142-011-9166-3>
- Frederickson, J. R., and J. S. Miller. 2004. The effects of pro forma earnings disclosures on analysts' and nonprofessional investors' equity valuation judgments. *The Accounting Review* 79 (3): 667–686. <https://doi.org/10.2308/accr.2004.79.3.667>
- Graham, J. R., C. R. Harvey, and M. Puri. 2013. Managerial attitudes and corporate actions. *Journal of Financial Economics* 109 (1): 103–121. <https://doi.org/10.1016/j.jfineco.2013.01.010>
- Gu, Z., and T. Chen. 2004. Analysts' treatment of nonrecurring items in street earnings. *Journal of Accounting and Economics* 38: 129–170. <https://doi.org/10.1016/j.jacceco.2004.09.002>
- Guest, N., S. P. Kothari, and R. Pozen. 2018. *High non-GAAP earnings predict abnormally high CEO pay*. Working paper, Cornell University.
- Ham, C., N. Seybert, and S. Wang. 2018. Narcissism is a bad sign: CEO signature size, investment, and performance. *Review of Accounting Studies* 23 (1): 234–264. <https://doi.org/10.1007/s11142-017-9427-x>
- Ham, C. M., M. Lang, N. Seybert, and S. Wang. 2017. CFO narcissism and financial reporting quality. *Journal of Accounting Research* 55 (5): 1089–1135. <https://doi.org/10.1111/1475-679X.12176>
- Hambrick, D. C. 2007. Upper echelons theory: An update. *Academy of Management Review* 32 (2): 334–343. <https://doi.org/10.5465/amr.2007.24345254>
- Hambrick, D. C., and P. A. Mason. 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review* 9 (2): 193–206. <https://doi.org/10.5465/amr.1984.4277628>
- Ingersoll, A. R., C. Glass, A. Cook, and K. J. Olsen. 2019. Power, status and expectations: How narcissism manifests among women CEOs. *Journal of Business Ethics* 158 (4): 893–907. <https://doi.org/10.1007/s10551-017-3730-0>
- Jennings, J., H. Seo, and M. Soliman. 2020. The market's reaction to changes in relative performance rankings. *Review of Accounting Studies* 25 (2): 672–725. <https://doi.org/10.1007/s11142-020-09532-1>
- Judd, J. S., K. J. Olsen, and J. Stekelberg. 2017. How do auditors respond to CEO narcissism? Evidence from external audit fees. *Accounting Horizons* 31 (4): 33–52. <https://doi.org/10.2308/acch-51810>
- Kolev, K., C. Marquardt, and S. McVay. 2008. SEC scrutiny and the evolution of non-GAAP reporting. *The Accounting Review* 83 (1): 157–184. <https://doi.org/10.2308/accr.2008.83.1.157>
- Lahart, J. 2016a. S&P 500 earnings: Far worse than advertised. *Wall Street Journal* (February 24). Available at: <https://www.wsj.com/articles/s-p-500-earnings-far-worse-than-advertised-1456344483>
- Lahart, J. 2016b. Investing red flag: Pro forma results and share-price performance. *Wall Street Journal* (March 24). Available at: <https://www.wsj.com/articles/investing-red-flag-pro-forma-results-and-share-price-performance-1458837868>
- Leung, E., and D. Veenman. 2018. Non-GAAP earnings disclosure in loss firms. *Journal of Accounting Research* 56 (4): 1083–1137. <https://doi.org/10.1111/1475-679X.12216>
- Maccoby, M. 2000. Narcissistic leaders: The incredible pros, the inevitable cons. *Harvard Business Review* (January/February). Available at: <https://hbr.org/2004/01/narcissistic-leaders-the-incredible-pros-the-inevitable-cons>
- Malmendier, U., and G. Tate. 2005. CEO overconfidence and corporate investment. *Journal of Finance* 60 (6): 2661–2700. <https://doi.org/10.1111/j.1540-6261.2005.00813.x>
- McVay, S. 2006. Earnings management using classification shifting: An examination of core earnings and special items. *The Accounting Review* 81 (3): 501–531. <https://doi.org/10.2308/accr.2006.81.3.501>
- Michaels, D. and M. Rapoport. 2016. SEC signals it could curb use of adjusted earnings figures. *Wall Street Journal* (March 16). Available at: <https://www.wsj.com/articles/sec-scrutinizing-use-of-non-gaap-measures-by-public-companies-1458139473>
- Morf, C. C., and F. Rhodewalt. 2001. Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry* 12 (4): 177–196. [https://doi.org/10.1207/S15327965PLI1204\\_1](https://doi.org/10.1207/S15327965PLI1204_1)
- Olsen, K. J., and J. Stekelberg. 2016. CEO Narcissism and Corporate Tax Sheltering. *Journal of the American Taxation Association* 38 (1): 1–22. <https://doi.org/10.2308/atax-51251>
- Olsen, K. J., K. K. Dworkis, and S. M. Young. 2014. CEO narcissism and accounting: A picture of profits. *Journal of Management Accounting Research* 26 (2): 243–267. <https://doi.org/10.2308/jmar-50638>
- O'Reilly, C. A. III, B. Doerr, D. F. Caldwell, and J. A. Chatman. 2014. Narcissistic CEOs and executive compensation. *Leadership Quarterly* 25 (2): 218–231. <https://doi.org/10.1016/j.leaqua.2013.08.002>
- Patel, P. C., and D. Cooper. 2014. The harder they fall, the faster they rise: Approach and avoidance focus in narcissistic CEOs. *Strategic Management Journal* 35 (10): 1528–1540. <https://doi.org/10.1002/smj.2162>
- Raskin, R., and H. Terry. 1988. A principal-components analysis of the narcissistic personality inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology* 54 (5): 890–902. <https://doi.org/10.1037/0022-3514.54.5.890>
- Resick, C. J., D. D. Whitman, S. M. Weingarden, and N. J. Hiller. 2009. The bright-side and the dark-side of CEO personality: Examining core evaluations, narcissism, transformational leadership, and strategic influence. *Journal of Applied Psychology* 94 (6): 1365–1381. <https://doi.org/10.1037/a0016238>
- Rijsenbilt, A., and H. Commandeur. 2013. Narcissus enters the courtroom: CEO narcissism and fraud. *Journal of Business Ethics* 117 (2): 413–429. <https://doi.org/10.1007/s10551-012-1528-7>

- Shumsky, T. and T. Francis. 2016. Accounting choices blur profit picture. *Wall Street Journal* (June 28). Available at: <https://www.wsj.com/articles/accounting-choices-blur-profit-picture-1467086625>
- U.S. Securities and Exchange Commission (SEC). 2002. *SEC brings first pro forma financial reporting case. 2002-6*. Available at: <https://www.sec.gov/news/headlines/trumphotels.htm> (last accessed June 5, 2020).
- Weil, J. 2003. Securities rules help to close the earnings reports GAAP. *Wall Street Journal* (April 24). Available at: <https://www.wsj.com/articles/SB105113025013952900>
- Yu, R. 2017. SEC cracking down on fuzzy math in company earnings. *USA Today* (January 12). Available at: <https://www.usatoday.com/story/money/2017/01/12/sec-cracking-down-fuzzy-math-company-earnings/96451422/>
- Zhou, X. 2001. Understanding the determinants of managerial ownership and its relationship to firm performance: comment. *Journal of Financial Economics* 62: 559–571. [https://doi.org/10.1016/S0304-405X\(01\)00085-X](https://doi.org/10.1016/S0304-405X(01)00085-X)
- Zhu, D. H., and G. Chen. 2015a. Narcissism, director selection, and risk-taking spending. *Strategic Management Journal* 36 (13): 2075–2098. <https://doi.org/10.1002/smj.2322>
- Zhu, D. H., and G. Chen. 2015b. CEO narcissism and the impact of prior board experience on corporate strategy. *Administrative Science Quarterly* 60 (1): 31–65. <https://doi.org/10.1177/0001839214554989>





**APPENDIX A**  
**Variable Definitions**

Variable Name	Definition
<i>Non-GAAP Exclusions</i>	Equal to I/B/E/S Actual EPS minus GAAP EPS. GAAP EPS is earnings per share before extraordinary items and discontinued operations. (Compustat data item epspxq) or diluted (data item epsfxq) EPS per the I/B/E/S basic/diluted flag.
<i>Exclude Narcissism</i>	Indicator variable equal to 1 if I/B/E/S Actual EPS exceeds GAAP EPS, and 0 otherwise. A composite measure based on relative cash compensation, relative noncash compensation, and the size and prominence of the CEO's photo in the firm's annual report.
<i>BTM</i>	Book-to-market is measured as the book value of equity (Compustat data item seqq) divided by the market value of equity at the end of the fiscal quarter (Compustat data item cshoq multiplied by Compustat data item prccq).
<i>SalesGrowth</i>	The quarterly change in revenue over the same quarter in the prior year (Compustat data item saleq).
<i>SizeEquity</i>	Log of market value of equity at quarter-end (Compustat data item cshoq multiplied by data item prccq).
<i>SizeAssets</i>	Log of total assets (Compustat data item atq).
<i>Profitable</i>	An indicator variable equaling 1 if I/B/E/S Actual EPS is positive, and 0 otherwise.
<i>ROA</i>	Return on assets, measured as I/B/E/S Actual EPS scaled by total assets per share (Compustat data item atq divided by Compustat item cshoq).
<i>Loss</i>	Indicator variable equal to 1 if quarterly GAAP earnings is less than zero, and 0 otherwise.
<i>Volatility</i>	The standard deviation of ROA over the preceding eight quarters.
<i>Future GAAP Earnings</i>	Earnings per share before extraordinary items (Compustat data item epsfxq) summed over quarters $q+1$ through $q+4$ .
<i>Future Operating Income</i>	Earnings per share from operations (Compustat data item opepsq) on a diluted basis summed over quarters $q+1$ through $q+4$ ; an implied dilution factor is used, which is calculated as the most recent annual basic shares outstanding (Compustat data item eshpri) divided by annual diluted shares outstanding (Compustat data item cshfd).
<i>Non-GAAP Earnings</i>	Non-GAAP earnings is the non-GAAP earnings number disclosed in the earnings announcement (I/B/E/S item VALUE).
<i>Special Items</i>	Operating income per share (Compustat item opepsq) – GAAP EPS before extraordinary items (Compustat item epspxq or epsfxq).
<i>Other Exclusions</i>	Non-GAAP exclusions – SPECITEMS.
<i>Other Exclusions Exclude</i>	Indicator variable equal to 1 if OTHEREXCL is greater than zero, and 0 otherwise.
<i>Special Items Exclude</i>	Indicator variable equal to 1 if SPECITEMS is greater than zero, and 0 otherwise.
<i>MBE</i>	Indicator variable that takes the value of 1 if SURPRISE is greater than or equal to zero, and 0 otherwise. SURPRISE is a continuous variable that is equal to I/B/E/S Actual EPS figure minus the median consensus analyst forecast from I/B/E/S.
<i>NOA</i>	Similar to Barton and Simko (2002), we calculate net operating assets as stockholders' equity less cash, less short-term investments, and plus total debt. We also scale net operating assets by sales.
<i>Firm Ranking</i>	Firm ranking is equal to firm $i$ 's performance ranking (in a descending order, i.e., higher value if ranking is high) within six-digit GICS industry divided by the number of firms in the same industry. Firm performance is equal to ROE. ROE is equal to firm $i$ 's I/B/E/S-reported Actual EPS in quarter $t$ multiplied by the weighted-average number of shares outstanding divided by the book value of equity at the beginning of quarter $t$ .